REMARKS

Claims 1-67 are pending. Claims 1, 27-28 and 42 are amended herein. Support for the claim amendments can be found at least at page 8, line 20, through page 9, line 9, of the instant application.

103 Rejections

Claims 1-3, 5-7, 12-14, 16, 18-19, 24-32, 35-44, 46-48, 53-55, 57, 59-60 and 65-67 versus Everitt et al. and Qureshi

The instant Office Action states that Claims 1-3, 5-7, 12-14, 16, 18-19, 24-32, 35-44, 46-48, 53-55, 57, 59-60 and 65-67 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Everitt et al. ("Everitt;" U.S. Patent No. 5,880,645) in view of "Adaptive Equalization" by Qureshi ("Qureshi"). The Applicants have reviewed the cited references and respectfully submit that Everitt and Qureshi, alone or in combination, do not show or suggest the present invention as recited in Claims 1-3, 5-7, 12-14, 16, 18-19, 24-32, 35-44, 46-48, 53-55, 57, 59-60 and 65-67.

Independent Claims 1 and 42 recite, respectively, a device and system that include "one or more inputs for receiving one or more of said filtered data signal output signals from a controllable analog filter, wherein a weighting function is applied to a filtered data signal output signal received from said controllable analog filter to emphasize a first portion of said filtered data signal output signal over a second portion of said filtered data signal output signal, said first portion corresponding to a middle point of a signal eye pattern representing signal amplitude versus time and said second portion corresponding to a zero crossing point of said signal eye pattern" (emphasis

added), while independent Claim 27 recites a method that includes "applying a weighting function is applied to a filtered data signal to emphasize a first portion of said filtered data signal over a second portion of said filtered data signal, said first portion corresponding to a middle point of a signal eye pattern representing signal amplitude versus time and said second portion corresponding to a zero crossing point of said signal eye pattern." Claims 2-3, 5-7, 12-14, 16, 18-19, 24-26, 28-32, 35-41, 43-44, 46-48, 53-55, 57, 59-60 and 65-67 are dependent on either Claim 1, 27 or 42 and recite additional limitations.

Applicants respectfully submit that Everitt does not show or suggest the limitations cited above. Everitt makes no mention of a weighting function that is applied to the output of an analog filter. Everitt describes using tap coefficients to weight delayed versions of an input in the feed forward equalizer portion of an adaptive equalizer circuit. However, the tap coefficients of Everitt do not weight a filtered data signal, as claimed.

Furthermore, the claimed weighting function is used to emphasize one portion of an signal's eye pattern over another portion of the eye pattern. The tap coefficients of Everitt do not provide this functionality.

Applicants respectfully submit that Qureshi does not overcome the shortcomings of Everitt. That is, Applicants found no reference in Qureshi to the claimed weighting function. Therefore, Applicants respectfully submit that Qureshi, alone or in combination with Everitt, does not show or suggest a device or system that includes "one or more inputs for receiving one or more

of said filtered data signal output signals from a controllable analog filter, wherein a weighting function is applied to a filtered data signal output signal received from said controllable analog filter to emphasize a first portion of said filtered data signal output signal over a second portion of said filtered data signal output signal, said first portion corresponding to a middle point of a signal eye pattern representing signal amplitude versus time and said second portion corresponding to a zero crossing point of said signal eye pattern" as recited in independent Claims 1 and 42, nor a method that includes "applying a weighting function is applied to a filtered data signal to emphasize a first portion of said filtered data signal over a second portion of said filtered data signal, said first portion corresponding to a middle point of a signal eye pattern representing signal amplitude versus time and said second portion corresponding to a zero crossing point of said signal eye pattern" as recited in independent Claim 27.

Accordingly, Applicants respectfully submit that the basis for rejecting independent Claims 1, 27 and 42 under 35 U.S.C. § 103(a) is traversed and that Claims 1, 27 and 42 are in condition for allowance. As such, Applicants respectfully submit that the basis for rejecting Claims 2-3, 5-7, 12-14, 16, 18-19, 24-26, 28-32, 35-41, 43-44, 46-48, 53-55, 57, 59-60 and 65-67 under 35 U.S.C. § 103(a) is also traversed, as these claims are dependent on allowable base claims and recite additional limitations.

Claims 1-4, 9-10, 17, 17, 20-23, 27, 31-34, 42-45, 50-51, 56, 58 and 61-64 versus Buchwald et al. and Qureshi

The instant Office Action states that Claims 1-4, 9-10, 17, 17, 20-23, 27, 31-34, 42-45, 50-51, 56, 58 and 61-64 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Buchwald et al. ("Buchwald;" U.S. Patent Application Publication No. 2002/0034222) in view of Qureshi. The Applicants have reviewed the cited references and respectfully submit that Buchwald and Qureshi, alone or in combination, do not show or suggest the present invention as recited in Claims 1-4, 9-10, 17, 17, 20-23, 27, 31-34, 42-45, 50-51, 56, 58 and 61-64.

Applicants respectfully submit that Buchwald does not show or suggest a device or system that includes "one or more inputs for receiving one or more of said filtered data signal output signals from a controllable analog filter, wherein a weighting function is applied to a filtered data signal output signal received from said controllable analog filter to emphasize a first portion of said filtered data signal output signal over a second portion of said filtered data signal output signal, said first portion corresponding to a middle point of a signal eye pattern representing signal amplitude versus time and said second portion corresponding to a zero crossing point of said signal eye pattern" as recited in independent Claims 1 and 42, nor a method that includes "applying a weighting function is applied to a filtered data signal to emphasize a first portion of said filtered data signal over a second portion of said filtered data signal, said first portion corresponding to a middle point of a signal eye pattern representing signal amplitude versus time and said second portion corresponding to a zero crossing point of said signal eye

pattern" as recited in independent Claim 27. Claims 2-4, 9-10, 17, 17, 20-23, 31-34, 43-45, 50-51, 56, 58 and 61-64 are dependent on either Claim 1, 27 or 42 and recite additional limitations.

Buchwald describes a fixed weight 1902 and a variable weight 1924 that scale the output of a sampler 1500. However, Buchwald makes no mention of a weighting function that is applied to the output of an analog filter. Furthermore, the claimed weighting function is used to emphasize one portion of an signal's eye pattern over another portion of the eye pattern. The fixed and variable weights of Buchwald do not provide this functionality.

Applicants respectfully submit that Qureshi does not overcome the shortcomings of Buchwald. That is, Applicants found no reference in Qureshi to the claimed weighting function. Therefore, Applicants respectfully submit that Qureshi, alone or in combination with Buchwald, does not show or suggest the limitations of independent Claims 1, 27 and 42 cited above.

Accordingly, Applicants respectfully submit that the basis for rejecting independent Claims 1, 27 and 42 under 35 U.S.C. § 103(a) is traversed and that Claims 1, 27 and 42 are in condition for allowance. As such, Applicants also respectfully submit that the basis for rejecting Claims 2-4, 9-10, 17, 17, 20-23, 31-34, 43-45, 50-51, 56, 58 and 61-64 under 35 U.S.C. § 103(a) is also traversed, as these claims are dependent on allowable base claims and recite additional limitations.

Claims 8 and 49 versus Buchwald, Qureshi and Glentis et al.

The instant Office Action states that Claims 8 and 49 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Buchwald in view of Quereshi and in further view of "Efficient Least Squares Adaptive Algorithms for FIR Transversal Filtering" by Glentis et al. ("Glentis-1"). The Applicants have reviewed the cited references and respectfully submit that Buchwald, Qureshi and Glentis-1, alone or in combination, do not show or suggest the present invention as recited in Claims 8 and 49.

Claim 8 is dependent on Claim 1 and recites additional limitations, and Claim 49 is dependent on Claim 42 and recites additional limitations. Hence, by demonstrating that Buchwald, Qureshi and Glentis-1, alone or in combination, do not show or suggest the limitations of Claims 1 and 42, it is also demonstrated that Buchwald, Qureshi and Glentis-1, alone or in combination, do not show or suggest the limitations of Claims 8 and 49.

As presented above, Applicants respectfully submit that Buchwald and Qureshi, alone or in combination, do not show or suggest a device or system that includes "one or more inputs for receiving one or more of said filtered data signal output signals from a controllable analog filter, wherein a weighting function is applied to a filtered data signal output signal received from said controllable analog filter to emphasize a first portion of said filtered data signal output signal over a second portion of said filtered data signal output signal, said first portion corresponding to a middle point of a signal eye pattern representing signal amplitude versus time and said second

portion corresponding to a zero crossing point of said signal eye pattern" as recited in independent Claims 1 and 42.

Applicants respectfully submit that Glentis-1 does not overcome the shortcomings of Buchwald and Qureshi. That is, Applicants found no reference in Glentis-1 to the claimed weighting function. Therefore, Applicants respectfully submit that Glentis-1, alone or in combination with Buchwald and Qureshi, does not show or suggest the claim limitations cited above.

As such, Applicants respectfully submit that the basis for rejecting Claims 8 and 49 under 35 U.S.C. § 103(a) is traversed, as Claims 8 and 49 are dependent on allowable base claims and recite additional limitations.

Claims 11 and 52 versus Buchwald, Qureshi and Glentis et al.

The instant Office Action states that Claims 11 and 52 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Buchwald in view of Qureshi and in further view of "Fast Adaptive Algorithms for Multichannel Filtering and System Identification" by Glentis et al. ("Glentis-2"). The Applicants have reviewed the cited references and respectfully submit that Buchwald, Qureshi and Glentis-2, alone or in combination, do not show or suggest the present invention as recited in Claims 11 and 52.

Claim 11 is dependent on Claim 1 and recites additional limitations, and Claim 52 is dependent on Claim 42 and recites additional limitations. Hence, by demonstrating that Buchwald, Qureshi and Glentis-2, alone or in

combination, do not show or suggest the limitations of Claims 1 and 42, it is also demonstrated that Buchwald, Qureshi and Glentis-2, alone or in combination, do not show or suggest the limitations of Claims 11 and 52.

As presented above, Applicants respectfully submit that Buchwald and Qureshi, alone or in combination, do not show or suggest a device or system that includes "one or more inputs for receiving one or more of said filtered data signal output signals from a controllable analog filter, wherein a weighting function is applied to a filtered data signal output signal received from said controllable analog filter to emphasize a first portion of said filtered data signal output signal over a second portion of said filtered data signal output signal, said first portion corresponding to a middle point of a signal eye pattern representing signal amplitude versus time and said second portion corresponding to a zero crossing point of said signal eye pattern" as recited in independent Claims 1 and 42.

Applicants respectfully submit that Glentis-2 does not overcome the shortcomings of Buchwald and Qureshi. That is, Applicants found no reference in Glentis-2 to the claimed weighting function. Therefore, Applicants respectfully submit that Glentis-2, alone or in combination with Buchwald and Qureshi, does not show or suggest the claim limitations cited above.

As such, Applicants respectfully submit that the basis for rejecting Claims 11 and 52 under 35 U.S.C. § 103(a) is traversed, as Claims 11 and 52 are dependent on allowable base claims and recite additional limitations.

Conclusions

In light of the above remarks, reconsideration of the rejected claims is respectfully requested.

Based on the arguments presented above, it is respectfully asserted that Claims 1-67 overcome the rejections of record and, therefore, allowance of these claims is solicited.

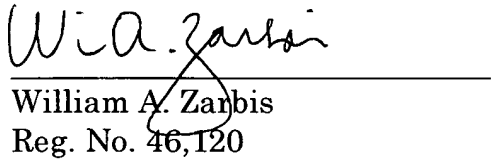
Applicants have reviewed the references cited but not relied upon. Applicants did not find these references to show or suggest the present claimed invention: U.S. Patent Nos. 6,922,407; 6,798,827; 6,437,932; 6,363,111; 6,167,082 and 5,864,545; and U.S. Patent Application Publication No. 2003/0081670.

The Examiner is invited to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

WAGNER, MURABITO & HAO LLP

Date: 10/11/05



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